1632
#14
8-12-02
P. 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

C ef
8-1-02

Application of:	Habener, et al.	Examiner: Unknown
Serial No.:	09/731,261	
Filed:	December 6, 2000	Group Art Unit: 1632
Entitled:	"Stem Cells of the Islets of Langerhans and Their Use in Treating Diabetes Mellitus"	Conf. No.: 9060

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8a

I hereby certify that this correspondence (and any paper or fee referred to as being enclosed) is being deposited with the United States Post Office as First Class Mail on the date indicated below in an envelope addressed to: U.S. Patent & Trademark Office, Box: Sequence, P.O. Box 2327, Arlington, VA 22202..

Kathleen Williams
Name of Person Mailing Paper

Signature of Person Mailing Paper

U.S. Patent and Trademark Office
Box: Sequence
P.O. Box: 2327
Arlington, VA 22202

TRANSMITTAL LETTER

Enclosed for filing the above-identified patent application, please find the following documents:

1. Copy of Notice to Comply;
2. Paper Copy of the Sequence Listing (20 pgs);
3. Computer Readable Copy of the Sequence Listing;
4. Statement Under 37 CFR 1.821 (f) and (g); and
5. Return Post Card.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any overpayment in the total fees to Deposit Account No. 16-0085, Reference 3284/1230. A duplicate of this transmittal letter is enclosed for this purpose.

Respectfully submitted,

Date: August 1, 2002

Name: Kathleen Williams
Registration No.: 34,380
Customer No.: 29933
Palmer & Dodge LLP
111 Huntington Avenue
Boston, MA 02199-7613
Tel: 617-239-0100

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,261	12/06/2000	Joel F. Habener	17633/1230	9060

29933   7590   07/02/2002

PALMER & DODGE, LLP
KATHLEEN M. WILLIAMS
111 HUNTINGTON AVENUE
BOSTON, MA   02199

EXAMINER
WEHBE, ANNE MARIE SABRINA

ART UNIT	PAPER NUMBER
1632	

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.
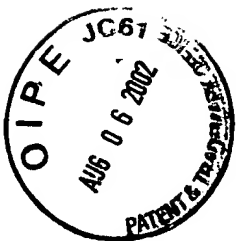
RECEIVED

AUG 0 9 2002

TECH CENTER 1600/2900

Docket # _____
Response due Notice to Comply - 1 month
Statutory period 8/1/02 (1/2/03
Palmer & Dodge LLP (SP)
Patent Department

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JUL 0 8 2002

PATENT DEPT.
PALMER & DODGE LLP

PTO-90C (Rev. 07-01)

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Box: Sequence
P.O. Box: 2327
Arlington, VA 22202

STATEMENT UNDER 37 C.F.R. §1.821(f) and (g)

Sir:

This paper is submitted in response to the Notice to Comply mailed by the USPTO on July 2, 2002.

In accordance with 37 C.F.R. §1.821 (f) I hereby state that the paper copy and the computer readable form of the Sequence Listing submitted herewith in the above-identified patent application are supported in the application and contain no new matter. I hereby state that the information recorded in computer readable form is identical to the written sequence listing.

In accordance with 37 C.F.R. §1.821 (g), I hereby state that the computer readable form of the Sequence Listing submitted herewith contains no new matter.

Respectfully submitted,

Date: August 1, 2002 _____

_____
Name: Kathleen Williams
Registration No.: 34,380
Customer No.: 29933
Palmer & Dodge LLP
111 Huntington Avenue
Boston, MA 02199-7613
Tel: 617-239-0100

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
09/731,261	12/06/00	Habener et al.	17633/1230

	EXAMINER
	A.M.S. Wehbé

ART UNIT	PAPER NUMBER
1632	13

DATE MAILED:

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AUG 09 2002
TECH CENTER 1600/2900

Please find below a communication from the EXAMINER in charge of this application.

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821 (a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. This is the second communication regarding this issue.

Any inquiry concerning this communication should be directed to Examiner A.M.S. Wehbé, Ph.D., Art Unit 1632, whose telephone number is (703) 306-9156. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0196.

APPLICANT IS GIVEN A ONE MONTH EXTENDABLE PERIOD WITHIN WHICH TO COMPLY WITH THE SEQUENCE RULES, 37 CFR 1.821-1.825. Failure to comply with these requirements will result in ABANDONMENT of this application under 37 CFR 1.821 (g). Extension of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136. In no case may an applicant extend the period for response beyond the six month statutory period. Applicant is requested to return a copy of the attached Notice To Comply with the response.

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s):

☐ 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.

☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).

☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).

☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."

☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).

☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).

☐ 7. Other:_____

Applicant Must Provide:

☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".

☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.

☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

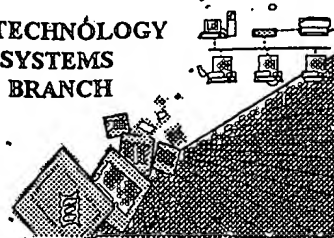For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
For PatentIn software help, call (703) 308-6856

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

RAW SEQUENCE LISTING
ERROR REPORT

**BIOTECHNOLOGY
SYSTEMS
BRANCH**

TECH CENTER 1600/2900 AUG 09 2002 RECEIVED

The Biotechnology Systems Branch of the Scientific and Technical Information
Center (STIC) detected errors when processing the following computer readable
form:

Application Serial Number: 09/731,261

Source: 1632

Date Processed by STIC: 6-5-02

**RECEIVED
-- JUN 07 2002
TECH CENTER 1600/2900**

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE
   APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A
   NOTICE TO COMPLY
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
 PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
 PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
        http://www.uspto.gov/web/offices/pac/checker

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is
a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the
United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , EFS Submission
   User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
   U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name,
   Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
            Or
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,
   2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,
   Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 09/731,261

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics The number/text at the end of each line "wrapped" down to the next line. This may occur if your file
   Wrapped Aminos was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will
   prevent "wrapping."

2 ____ Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers;
   Numbering use space characters, instead.

4 ____ Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please
   ensure your subsequent submission is saved in ASCII text.

5 ____ Variable Length Sequence(s)____ contain n's or Xaa's representing more than one residue. Per Sequence Rules,
   each n or Xaa can only represent a single residue. Please present the maximum number of each
   residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0 A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
   "bug" sequences(s) _____. Normally, PatentIn would automatically generate this section from the
   previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to
   the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for
   Artificial or Unknown sequences.

7 ____ Skipped Sequences Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence:
   (OLD RULES) (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
   (i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
   (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
   This sequence is intentionally skipped

   Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 ____ Skipped Sequences Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
   (NEW RULES) <210> sequence id number
   <400> sequence id number
   000

9 ____ Use of n's or Xaa's Use of n's and/or Xaa's have been detected in the Sequence Listing.
   (NEW RULES) Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
   In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 ____ Invalid <213> Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or
   Response scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or
   is Artificial Sequence

11 ____ Use of <220> Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses.
   Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or
   "Unknown." Please explain source of genetic material in <220> to <223> section.
   (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0 Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,
   "bug" resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence
   listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

AMC – Biotechnology Systems Branch – 06/04/2001

Does Not Comply
Corrected Diskette Needed
See Additional pages 1 & 2
See extra page 1
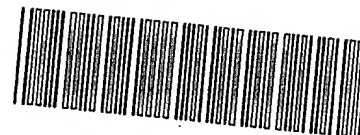
1632

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3 <110> APPLICANT: Habener, Joel
4   Zulewski, Hendrik
5   Abraham, Elizabeth
6   Vallejo, Mario
8 <120> TITLE OF INVENTION: STEM CELLS OF THE ISLETS OF LANGERHANS AND THEIR USE IN
TING DIABETES
9   MELLITUS
11 <130> FILE REFERENCE: 3284/1230
13 <140> CURRENT APPLICATION NUMBER: US 09/731,261
14 <141> CURRENT FILING DATE: 2000-12-06
16 <150> PRIOR APPLICATION NUMBER: US 60/169,082
17 <151> PRIOR FILING DATE: 1999-12-06
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20 <151> PRIOR FILING DATE: 2000-06-28
22 <150> PRIOR APPLICATION NUMBER: US 60/239,880
23 <151> PRIOR FILING DATE: 2000-10-06
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27 <170> SOFTWARE: PatentIn version 3.1
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 4854
31 <212> TYPE: DNA
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   <400> SEQUENCE: 1

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6/5/02

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PATENT APPLICATION: US/09/731,261   TIME: 10:14:17

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RAW SEQUENCE LISTING　　　　　DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261　　TIME: 10:14:17

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200 <212> TYPE: PRT
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206 1               5                   10                  15
209 Arg Arg Leu Glu Ala Tyr Leu Gly Arg Val Lys Ala Leu Glu Glu Gln
210             20                  25                  30
213 Asn Glu Leu Leu Ser Ala Gly Leu Gly Gly Leu Arg Arg Gln Ser Ala
214             35                  40                  45
217 Asp Thr Ser Trp Arg Ala His Ala Asp Asp Glu Leu Ala Ala Leu Arg
218     50                  55                  60
221 Ala Leu Val Asp Gln Arg Trp Arg Glu Lys His Ala Ala Glu Val Ala
222 65                  70                  75                  80
225 Arg Asp Asn Leu Ala Glu Glu Leu Glu Gly Val Ala Gly Arg Cys Glu
226             85                  90                  95
229 Gln Leu Arg Leu Ala Arg Glu Arg Thr Thr Glu Glu Val Ala Arg Asn
230             100                 105                 110
233 Arg Arg Ala Val Glu Ala Glu Lys Cys Ala Arg Ala Trp Leu Ser Ser
234             115                 120                 125
237 Gln Gly Ala Glu Leu Glu Arg Glu Leu Glu Ala Leu Arg Val Ala His
238     130                 135                 140
241 Glu Glu Glu Arg Val Gly Leu Asn Ala Gln Ala Ala Cys Ala Pro Arg
242 145                 150                 155                 160
245 Leu Pro Ala Pro Pro Arg Pro Pro Ala Pro Ala Pro Glu Val Glu Glu
246             165                 170                 175
249 Leu Ala Arg Arg Leu Gly Glu Ala Trp Arg Gly Ala Val Arg Gly Tyr
250             180                 185                 190
253 Gln Glu Arg Val Ala His Met Glu Thr Ser Leu Asp Gln Thr Arg Glu
254     195                 200                 205
257 Arg Leu Ala Arg Ala Val Gln Gly Ala Arg Glu Val Arg Leu Glu Leu
258     210                 215                 220
261 Gln Gln Leu Gln Ala Glu Arg Gly Gly Leu Leu Glu Arg Arg Ala Ala
262 225                 230                 235                 240
265 Leu Glu Gln Arg Leu Glu Gly Arg Trp Gln Glu Arg Leu Arg Ala Thr
266             245                 250                 255
269 Glu Lys Phe Gln Leu Ala Val Glu Ala Leu Glu Gln Glu Lys Gln Gly
```

RAW SEQUENCE LISTING   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:17

Input Set : A:\ptoms.TXT
Output Set: N:\CRF3\06052002\I731261.raw

```
270              260              265              270
273 Leu Gln Ser Gln Ile Ala Gln Val Leu Glu Gly Arg Gln Gln Leu Ala
274          275              280              285
277 His Leu Lys Met Ser Leu Ser Leu Glu Val Ala Thr Tyr Arg Thr Leu
278      290              295              300
281 Leu Glu Ala Glu Asn Ser Arg Leu Gln Thr Pro Gly Gly Gly Ser Lys
282 305              310              315              320
285 Thr Ser Leu Ser Phe Gln Asp Pro Lys Leu Glu Leu Gln Phe Pro Arg
286              325              330              335
289 Thr Pro Glu Gly Arg Arg Leu Gly Ser Leu Leu Pro Val Leu Ser Pro
290              340              345              350
293 Thr Ser Leu Pro Ser Pro Leu Pro Ala Thr Leu Glu Thr Pro Val Pro
294          355              360              365
297 Ala Phe Leu Lys Asn Gln Glu Phe Leu Gln Ala Arg Thr Pro Thr Leu
298      370              375              380
301 Ala Ser Thr Pro Ile Pro Pro Thr Pro Gln Ala Pro Ser Pro Ala Val
302 385              390              395              400
305 Asp Ala Glu Ile Arg Ala Gln Asp Ala Pro Leu Ser Leu Leu Gln Thr
306              405              410              415
309 Gln Gly Gly Arg Lys Gln Ala Pro Glu Pro Leu Arg Ala Glu Ala Arg
310          420              425              430
313 Val Ala Ile Pro Ala Ser Val Leu Pro Gly Pro Glu Glu Pro Gly Gly
314          435              440              445
317 Gln Arg Gln Glu Ala Ser Thr Gly Gln Ser Pro Glu Asp His Ala Ser
318      450              455              460
321 Leu Ala Pro Pro Leu Ser Pro Asp His Ser Ser Leu Glu Ala Lys Asp
322 465              470              475              480
325 Gly Glu Ser Gly Gly Ser Arg Val Phe Ser Ile Cys Arg Gly Glu Gly
326          485              490              495
329 Glu Gly Gln Ile Trp Gly Leu Val Glu Lys Glu Thr Ala Ile Glu Gly
330          500              505              510
333 Lys Val Val Ser Ser Leu Gln Gln Glu Ile Trp Glu Glu Glu Asp Leu
334      515              520              525
337 Asn Arg Lys Glu Ile Gln Asp Ser Gln Val Pro Leu Glu Lys Glu Thr
338      530              535              540
341 Leu Lys Ser Leu Gly Glu Glu Ile Gln Glu Ser Leu Lys Thr Leu Glu
342 545              550              555              560
345 Asn Gln Ser His Glu Thr Leu Glu Arg Glu Asn Gln Glu Cys Pro Arg
346              565              570              575
349 Ser Leu Glu Glu Asp Leu Glu Thr Leu Lys Ser Leu Glu Lys Glu Asn
350              580              585              590
353 Lys Arg Ala Ile Lys Gly Cys Gly Gly Ser Glu Thr Ser Arg Lys Arg
354          595              600              605
357 Gly Cys Arg Gln Leu Lys Pro Thr Gly Lys Glu Asp Thr Gln Thr Leu
358      610              615              620
361 Gln Ser Leu Gln Lys Glu Asn Gln Glu Leu Met Lys Ser Leu Glu Gly
362 625              630              635              640
365 Asn Leu Glu Thr Phe Leu Phe Pro Gly Thr Glu Asn Gln Glu Leu Val
366              645              650              655
```

RAW SEQUENCE LISTING   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:17

Input Set : A:\ptoms.TXT
Output Set: N:\CRF3\06052002\I731261.raw

```
369 Ser Ser Leu Gln Glu Asn Leu Glu Ser Leu Thr Ala Leu Glu Lys Glu
370             660             665             670
373 Asn Gln Glu Pro Leu Arg Ser Pro Glu Val Gly Asp Glu Glu Ala Leu
374         675             680             685
377 Arg Pro Leu Thr Lys Glu Asn Gln Glu Pro Leu Arg Ser Leu Glu Asp
378     690             695             700
381 Glu Asn Lys Glu Ala Phe Arg Ser Leu Glu Lys Glu Asn Gln Glu Pro
382 705             710             715             720
385 Leu Lys Thr Leu Glu Glu Glu Asp Gln Ser Ile Val Arg Pro Leu Glu
386             725             730             735
389 Thr Glu Asn His Lys Ser Leu Arg Ser Leu Glu Glu Gln Asp Gln Glu
390             740             745             750
393 Thr Leu Arg Thr Leu Glu Lys Glu Thr Gln Gln Arg Arg Arg Ser Leu
394         755             760             765
397 Gly Glu Gln Asp Gln Met Thr Leu Arg Pro Pro Glu Lys Val Asp Leu
398     770             775             780
401 Glu Pro Leu Lys Ser Leu Asp Gln Glu Ile Ala Arg Pro Leu Glu Asn
402 785             790             795             800
405 Glu Asn Gln Glu Phe Leu Lys Ser Leu Lys Glu Glu Ser Val Glu Ala
406             805             810             815
409 Val Lys Ser Leu Glu Thr Glu Ile Leu Glu Ser Leu Lys Ser Ala Gly
410             820             825             830
413 Gln Glu Asn Leu Glu Thr Leu Lys Ser Pro Glu Thr Gln Ala Pro Leu
414         835             840             845
417 Trp Thr Pro Glu Glu Ile Asn Lys Ser Gly Gly Asn Glu Ser Ser Arg
418     850             855             860
421 Lys Gly Asn Ser Arg Thr Thr Gly Val Cys Gly Ser Glu Pro Arg Asp
422 865             870             875             880
425 Ile Gln Thr Pro Gly Arg Gly Glu Ser Gly Ile Ile Glu Ile Ser Gly
426             885             890             895
429 Ser Met Glu Pro Gly Glu Phe Glu Ile Ser Arg Gly Val Asp Lys Glu
430             900             905             910
433 Ser Gln Arg Asn Leu Glu Glu Glu Asn Leu Gly Lys Gly Glu Tyr
434         915             920             925
437 Gln Glu Ser Leu Arg Ser Leu Glu Glu Glu Gly Gln Glu Leu Pro Gln
438     930             935             940
441 Ser Ala Asp Val Gln Arg Trp Glu Asp Thr Val Glu Lys Asp Gln Glu
442 945             950             955             960
445 Leu Ala Gln Glu Ser Pro Pro Gly Met Ala Gly Val Glu Asn Lys Asp
446             965             970             975
449 Glu Ala Glu Leu Asn Leu Arg Glu Gln Asp Gly Phe Thr Gly Lys Glu
450             980             985             990
453 Glu Val Val Glu Gln Gly Glu Leu Asn Ala Thr Glu Glu Val Trp Phe
454         995             1000            1005
457 Pro Gly Glu Gly His Pro Glu Asn Pro Glu Pro Lys Glu Gln Arg
458     1010            1015            1020
461 Gly Leu Val Glu Gly Ala Ser Val Lys Gly Gly Ala Glu Gly Leu
462     1025            1030            1035
465 Gln Asp Pro Glu Gly Gln Ser Gln Gln Val Gly Thr Pro Gly Leu
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:18

Input Set : **A:\ptoms.TXT**
Output Set: **N:\CRF3\06052002\I731261.raw**

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 8

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29
Seq#:30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53
Seq#:54,55

Use of <220> Feature(NEW RULES):
Sequence(s)__are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
or"Unknown". Please explain source of genetic material in <220> to <223>
section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32)
(Sec.1.823 of new Rules)

Seq#:7

VERIFICATION SUMMARY   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:18

Input Set : A:\ptoms.TXT
Output Set: N:\CRF3\06052002\I731261.raw

L:624 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:3
L:627 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:3
L:639 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:4
L:642 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
L:654 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:5
L:657 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:5
L:669 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:6
L:672 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:6
L:684 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:7
L:686 M:258 W: Mandatory Feature missing, <220> FEATURE:
L:686 M:258 W: Mandatory Feature missing, <223> OTHER INFORMATION:
L:693 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:8
L:696 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:8
L:708 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:9
L:711 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:9
L:723 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:10
L:726 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:10
L:738 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:11
L:741 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:11
L:753 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:12
L:756 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:12
L:768 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:13
L:771 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:13
L:783 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:14
L:786 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:14
L:798 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:15
L:801 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:15
L:813 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:16
L:816 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:16
L:828 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:17
L:831 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:17
L:843 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:18
L:846 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:18
L:858 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:19
L:861 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:19
L:873 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:20
L:876 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:20
L:888 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:21
L:891 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:21
L:903 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:906 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:22
L:918 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:23
L:921 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:23
L:933 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:24
L:936 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:24
L:948 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:25
L:951 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:25
L:963 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:26

VERIFICATION SUMMARY   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:18

Input Set : A:\ptoms.TXT
Output Set: N:\CRF3\06052002\I731261.raw

```
L:966 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:26
L:978 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:27
L:981 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:27
L:993 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:28
L:996 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:28
L:1008 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:29
L:1011 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:29
L:1023 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:30
L:1026 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:30
L:1038 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:31
L:1041 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:31
L:1053 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:32
L:1056 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:32
L:1068 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:33
L:1071 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:33
L:1083 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:34
L:1086 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:34
L:1098 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:35
L:1101 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:35
L:1113 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:36
L:1116 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:36
L:1128 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:37
L:1131 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:37
L:1143 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:38
L:1146 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:38
L:1158 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:39
L:1161 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:39
L:1173 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:40
L:1176 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:40
L:1188 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:41
L:1191 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:41
L:1203 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:42
L:1206 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:42
L:1218 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:43
L:1221 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:43
L:1233 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:44
L:1236 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:44
L:1248 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:45
L:1251 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:45
L:1263 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:46
L:1266 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:46
L:1278 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:47
L:1281 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:47
L:1293 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:48
L:1296 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:48
L:1308 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:49
L:1311 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:49
L:1323 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:50
L:1326 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:50
```

VERIFICATION SUMMARY   DATE: 06/05/2002
PATENT APPLICATION: US/09/731,261   TIME: 10:14:18

Input Set : **A:\ptoms.TXT**
Output Set: **N:\CRF3\06052002\I731261.raw**

```
J:1338 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:51
J:1341 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:51
J:1353 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:52
J:1356 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:52
J:1371 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:53
```

```
<210>  7
<211>  20
<212>  DNA
<213>  (Artificial)
<400>  7
ctgtgtcagc acgcacgtta
```

— See item #11 on ERROR SUMMARY SHEET.

20

Note: When Artificial Sequence is used for numeric identifier <213> use of <220>, <223> are mandatory.

```
<210>   3
<211>   20
<212>   DNA
<213>   Artificial
```

See item # 11 on Error Summary Sheet.

```
<220>
<221>   primer
<222>   (1)..(20)
<223>
```

note: when Artificial Sequence is used in numeric Identifier <213>, use of <220> and <223> are mandatory. Numeric Identifier <221> and <222> are not necessary when numeric Identifier <213> is Artificial Sequence.
primer for response to numeric Identifier <223> is OK.

```
<400>   3
gcggggcggt gcgtgactac                                              20
```

```
<210>   4
<211>   24
<212>   DNA
<213>   Artificial
```

```
<220>
<221>   primer
<222>   (1)..(24)
<223>
```

```
<400>   4
aggcaagggg gaagagaagg atgt                                         24
```

The type of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

```
<210>   5
<211>   35
<212>   DNA
<213>   Artificial
```

```
<220>
<221>   primer
<222>   (1)..(35)
<223>
```

```
<400>   5
aagctgaagc cgaatttcct tgggatacca gagga                             35
```

```
<210>   6
<211>   20
<212>   DNA
<213>   Artificial
```

```
<220>
<221>   primer
<222>   (1)..(20)
<223>
```

```
<400>   6
```

Beckerles

Does Not Comply
Corrected Diskette Needed

Extr page 1

1632

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/731,261

DATE: 05/30/2002
TIME: 10:11:24

Input Set : A:\PTO.PG.TXT
Output Set: N:\CRF3\05302002\I731261.raw

```
 3 <110> APPLICANT: Habener, Joel
 4        Zulewski, Hendrik
 5        Abraham, Elizabeth
 6        Vallejo, Mario
 8 <120> TITLE OF INVENTION: STEM CELLS OF THE ISLETS OF LANGERHANS AND THEIR USE IN
TREATING DIABETES
 9        MELLITUS
11 <130> FILE REFERENCE: 3284/1230
13 <140> CURRENT APPLICATION NUMBER: US 09/731,261
14 <141> CURRENT FILING DATE: 2000-12-06
16 <150> PRIOR APPLICATION NUMBER: US 60/169,082
17 <151> PRIOR FILING DATE: 1999-12-06
19 <150> PRIOR APPLICATION NUMBER: US 60/215,109
20 <151> PRIOR FILING DATE: 2000-06-28
22 <150> PRIOR APPLICATION NUMBER: US 60/239,880
23 <151> PRIOR FILING DATE: 2000-10-06
25 <160> NUMBER OF SEQ ID NOS: 55
27 <170> SOFTWARE: PatentIn version 3.1
```

ERRORED SEQUENCES

```
     1397 <210> SEQ ID NO: 55
     1398 <211> LENGTH: 24
     1399 <212> TYPE: DNA
C--> 1400 <213> ORGANISM: Artificial
     1402 <220> FEATURE:
W--> 1403 <221> NAME/KEY: PRIMER
     1404 <222> LOCATION: (1)..(24)
     1405 <223> OTHER INFORMATION:
     1408 <400> SEQUENCE: 55
     1409 gggtggtgag ggttgaggtt tgtg                              24
E--> 1412 1
E--> 1415 3
E--> 1418 1
E--> 1421 1
E--> 1424  - 1 -
E--> 1426  - 3 -
```

remove extra material at end of file.

5/30/02